REMARKS/ARGUMENTS

Claims 5, 18, and 23-37 are pending in the application. Claims 5, 18, and 23-37 were rejected. Applicants have not herein amended any of the claims currently pending. Applicants respectfully request reconsideration and allowance of all pending claims.

Discussion of Rejections Under 35 U.S.C. §103

Claims 5, 25 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kliger in view of Wu. The Examiner has indicated that Applicants' arguments are not persuasive. The Examiner disputed Applicants' contention that Kliger does not teach or suggest using a filter to reflect the signals back through the splitter for transmission to other devices in the network.

Applicants reiterate the requirement to establish a *prima facie* case of obviousness. That is, the prior art reference, or references when combined, must provide all of the claim limitations and must establish that it would be obvious for one of ordinary skill in the art to combine the references in a way that would successfully result in the claimed invention.

Applicants contend that, in light of the amendments previously made to the claims as once again presented, a *prima facie* case of obviousness cannot be established and Applicants respectfully traverse the rejections. In particular, Applicants respectfully request that the Examiner reconsider the applicants contention that the references, neither alone nor in combination, teach nor suggest all claimed features. Even more particularly, Applicants respectfully still contend that none of the references teach, suggest or motivate one of ordinary skill in the art to make the claimed invention, since none of the cited references teach **a filter that reflects signals back into a splitter** in order to allow terminals coupled to the tap ports (those ports other than the common port) within a network to communicate directly with one another. Nor would it otherwise be obvious to combine elements provided in the prior art in light of the failure of the prior art to provide the missing element of a filter tuned to reflect signals back into a splitter.

The Examiner disagreed with Applicants' statement that Kliger doesn't teach or suggest the use of a filter. The Examiner supported that position by pointing to the Home-

network Reflection Unit (HRU) 44 disclosed by Kliger. On page 3 of the Final Office Action mailed on 4/4/08, the Examiner stated that Kliger teaches a filter 44 (Fig. 2) tuned to reflect signals back into the building. However, Applicants respectfully contend that upon inspection of Kliger, it is clear that the device that Kliger discloses in figure 2 as HRU 44 is not a filter that reflects signals back into the building at all. Rather, at paragraph 51, Kliger states that:

> FIG. 2 shows an embodiment of the DPU 14 including a **diplexer 40**, a **home-network reflector unit (HRU) 44** and a splitter 24". In general, **the diplexer 40 separates** a cable TV (CaTV) signal (or satellite signal) received from the external network 18 from a home network signal received from the HNMs 28 connected to the backbone 20. One input/output (I/O) port (the "L" port) **of the diplexer 40** transmits and receives the CaTV signal (or satellite signal) to and from the external network 18. Another I/O port (the "H" port) **of the diplexer 40** transmits and receives the home network signal to and from HRU 44.

It should be noted that the diplexer 40 and the HRU 44 are two distinct and separate devices with quite distinct and different functions. Kliger goes on in paragraph 52 to say:

> The "L" port uses a low-pass filter at a certain predetermined frequency, fc, and the "H" port uses a high-pass filter at the same frequency, fc. By setting the frequency, fc, to about 900 MHz, for example, the low-pass "L" port transfers TV signals (5-860 Mhz), and the high-pass "H" port transfers the home network signal above 860 MHz. More specifically, one embodiment sets the cutoff frequency to 950 MHz to separate frequencies above 950 MHz for use by the home network signal from the CaTV signals, which are in the 5-860 MHz range.

Accordingly, it is the function of the diplexer 40, and more particularly the filters with in the diplexer, to separate the high frequency signals that carry the home network signals from the low frequency signals that carry the TV signals. The high frequency home network signals are then coupled to the HRU 44. No signals are reflected by the diplexer 40, since they are either routed to the L port or the H port. It is then the HRU 44 which the Examiner

correctly noted reflects the home network signals back into the diplexer, and thus through to the splitter 24'. However, in describing at paragraph 54 the HRU 44 shown in figure 2, Kliger states:

> In some embodiments, the HRU 44 is **either an unterminated or a shorted** coaxial cable, which reflects the home network signal received from the diplexer 40 back to the diplexer 40. Some embodiments of a passive HRU connect one port of a passive delay line to the H port of the diplexer 40 to improve the performance of the network 10 by avoiding signal fading. In such embodiments, the other port of the passive delay line **is unterminated or shorted**. In still other embodiments, **leaving an output of the diplexer 40 unterminated or by shorting that output to ground attains reflection** of the home network signal. These embodiments of the HRU 44 are referred to as passive HRUs.

Note that nothing in the description of the HRU 44 teaches or suggests that the HRU 44 is (or uses) a filter of any kind. Applicants contend that the failure of Kliger to teach or disclose the use of a filter in the HRU 44 is due to the effects that were discussed in the previous response, namely the distortion that the use of a filter to reflect the signals would create, and which is improved by the use of the circuits for doing bitloading and power control, as those terms were discussed and described in Applicants' previous response.

Kliger goes on in paragraphs 55 and 56 to disclose another embodiment of the HRU 44 (shown in figure 2A). However, while the embodiment disclosed in figure 2A teaches the inclusion of two bandpass filters (BPFs) in the HRU 44, those filters are only used for the purpose of separating the high frequencies from the low frequencies. The two BPFs shown in figure 2A clearly **do not reflect the signal** that is applied to them. Therefore, that embodiment does no more then did the embodiment of figure 2 to teach or suggest the use of a filter to **reflect** signals back into the splitter. Accordingly, Kliger fails to teach the claimed elements of:

> a **filter** located at the point of entry of a building **tuned to reflect network signals** originating in the building back into the building

and

wherein the **reflections from the filter** provide a path for terminal devices back through the tap port of the signal splitter and out each other tap port to transmit signals to other terminal devices thus allowing terminal devices to communicate directly with each other to form the signal distribution network.

As previously noted, it would **not** be reasonable for one of ordinary skill in the art to modify the teaching of Kliger to substitute a filter for the HRU disclosed by Kliger, since the resulting distortions would cause serious problems which are only corrected in the presently claimed invention by the use of one of the two techniques recited in the claims (i.e., either bitloading or power control). Accordingly, Applicants respectfully contend that the presently claimed invention would not be obvious to one of ordinary skill in the art.

Accordingly, Applicants respectfully contend that the claims as previously amended and once again presented place the application in condition for allowance. Accordingly, applicants believe that it would be appropriate to enter this response and allow all claims based upon the failure of the prior art to teach or suggest the use of a filter located at the point of entry of a building tuned to reflect network signals originating in the building back into the building.

It should be noted that Claim 18, 23 and 24 depend from Claim 5 and accordingly, for the reasons stated above, each of these claims should are considered to be in condition for allowance.

Claim 25 has been amended to recite the filter as described above and the bitloading technique discussed in connection with the use of the filter. Since, as noted above, none of the references teach or suggest the filter recited in Claim 25, Applicants respectfully contend that Claim 25 is also in condition for allowance. Claims 26-28 and 36 depend from Claim 25 and so for the same reasons as noted with regard to Claim 25, Applicants respectfully content that Claims 26-28 and 36 are in condition for allowance.

Likewise, Claim 29 has been amended to recite the filter discussed above with respect to Claim 5 and thus Applicants contend that Claim 29 and those claims that depend therefrom (Claims 30-35, and 37) are in condition for allowance.

It should be noted that while the Examiner has cited several additional references (including: Manssen, Zhang, Ling, Mukherjee and Kapoor) in rejecting some of the dependent claims, none of these references teach or suggest the missing element of a filter turned to reflect signals back into the network from which they were transmitted together with the use of bitloading and/or power control to make use of the filter viable as described above and recited in the claims as now presented.

Accordingly, Applicants respectfully request reconsideration and allowance of claims 5, 25, 29 and those claims that depend therefrom.

CONCLUSION

Applicants believe that all claims pending in the application are allowable. Applicants therefore respectfully request that a timely Notice of Allowance be issued in this case.

This is a response to the Office Action mailed on 4/4/08, and as such, is submitted together with a request for a one month extension of time and the fee required for such a one month extension of time.

If there are any other fees due in connection with the filing of the response, please charge the fees to our Deposit Account No. 50-4613. If a fee is required for an extension of time under 37 CFR 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned.

Respectfully submitted,

Dated: July 28, 2008

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